

REMARKS

Claims 13, 14 and 26 to 36 remain pending in the application. No amendments to the claims are made herein.

Claims 13 and 14 are allowed. Claims 26 to 36 stand rejected under 35 U.S.C. § 103 as allegedly obvious over Shiozaki et al., U.S. Patent No. 4,366,093 (“Shiozaki”) in view of Eichhorn et al., U.S. Patent No. 4,740,644 (“Eichhorn”). Applicants again respectfully traverse this rejection, because the cited references, even if combined, fail to teach all of the elements of the claims.

As noted in Applicants’ previous response, Shiozaki teaches the potential use of *pellets* as catalyst supports for fixed bed processes and reactions, where the pellets are in the shape of hollow cylinders, 3 to 6 mm. in outer diameter and length (*see* Abstract). Eichhorn describes the preparation of 1,2-dichloroethane by oxychlorination of ethylene over a copper-containing catalyst. Eichhorn teaches that the catalyst is impregnated “on a conventional carrier” (col. 3, lines 33-34) without elaboration. The examples in Eichhorn are performed with catalysts as annular pellets having a height and external diameter of 5 mm (*see* col.2, lines 51-52). Thus both of these references describe the use of catalysts *in pellet form*, and neither of these references contains any disclosure of catalysts *supported by a metallic monolith having channels* the walls of which are adapted to receive a catalytically active phase for selective gas phase reaction in tubular reactors, as recited in independent claims 26 and 34.

It appears that the Examiner is mistaking the catalyst *pellets* of Shiozaki for metallic monolith *catalyst supports*. However, as should be readily appreciated, a metallic monolith *support* is different from the catalyst itself. The use of a metallic monolith to support the catalyst in a selective reaction provides a number of advantages neither taught nor suggested by the art of record. These advantages include:

- Improved properties with respect to heat production and hot-spots;
- Slower catalyst deactivation;
- Higher reaction purity and selectivity;
- Improved pressure properties;

- The possibility of using larger diameter reaction tubes (which may ultimately lead to lower cost); and
- The possibility of using single reactors and single reactor feed points as opposed to multi-reactor systems and multiple feed inlets.

Since neither of the cited references disclose the use of a metallic *monolith support*, as recited in the rejected claims, the references fail to establish a *prima facie* case of obviousness. Accordingly, Applicants respectfully submit that the rejection should be withdrawn.

CONCLUSION

Applicants respectfully submit that the pending claims are in condition for allowance. Withdrawal of all pending rejections and a Notice of Allowance for all of pending claims 13, 14 and 26 to 36 is earnestly solicited.

If the Examiner is not persuaded that the application is in condition for allowance, Applicants request that an interview with the Examiner and her supervisor be arranged at the Examiner's earliest convenience. Applicants undersigned representative may be reached via direct dial at (215) 564-8392.

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